

USSN: 10/809,259
Atty. Docket No.: 10236A
Amendment dated June 12, 2006
Reply to Office Action of March 10, 2006

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AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

- 1-13. (canceled).
14. (previously presented): A coextruded heat-sealable film structure, comprising:
 - (a) a core layer comprising a thermoplastic polymer, the core layer having a first side and a second side;
 - (b) a functional layer on the first side of the core layer, wherein the functional layer is selected from the group consisting of a laminating layer, a printable layer, a laminating and a printable layer, and a sealable layer; and
 - (c) a heat-sealable layer on the second side of the core layer comprising (i) a thermoplastic polymer and (ii) a slip system comprising a silicone gum having a viscosity greater than one million centistokes present in amount from about 0.2 wt. % to about 2.0 wt. % of the heat-sealable layer and at least one antiblocking agent present in an amount from about 0.05 wt. % to about 0.5 wt. % of the heat-sealable layer;
 - (d) wherein the core layer has a polymeric matrix selected from the group consisting of a ethylene propylene copolymer, propylene butylene copolymer, and a high density polyethylene; and
 - (e) wherein the core layer comprises a cavitating agent selected from the group consisting of polybutylene terephthalate, calcium carbonate, and blends thereof.
15. (previously presented): A laminate film structure, comprising a first film laminated to a second film, wherein the first film is a heat-sealable film structure comprising:

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(a) a core layer comprising a thermoplastic polymer, the core layer having a first side and a second side;

(b) a functional layer on the first side of the core layer, wherein the functional layer is selected from the group consisting of a laminating layer, a printable layer, a laminating and a printable layer, and a sealable layer; and

(c) a heat-sealable layer on the second side of the core layer comprising (i) a thermoplastic polymer and (ii) a slip system comprising a silicone gum having a viscosity greater than one million centistokes present in amount from about 0.2 wt. % to about 2.0 wt. % of the heat-sealable layer and at least one antiblocking agent present in an amount from about 0.05 wt. % to about 0.5 wt. % of the heat-sealable layer;

(d) wherein the second film is comprised of the same structure as the first film.

16. (previously presented): A laminate film structure, comprising a first film laminated to a second film, wherein the first film is a heat-sealable film structure comprising:

(a) a core layer comprising a thermoplastic polymer, the core layer having a first side and a second side;

(b) a functional layer on the first side of the core layer, wherein the functional layer is selected from the group consisting of a laminating layer, a printable layer, a laminating and a printable layer, and a sealable layer; and

(c) a heat-sealable layer on the second side of the core layer comprising (i) a thermoplastic polymer and (ii) a slip system comprising a silicone gum having a viscosity greater than one million centistokes present in amount from about 0.2 wt. % to about 2.0 wt. % of the heat-sealable layer and at least one antiblocking agent present in an amount from about 0.05 wt. % to about 0.5 wt. % of the heat-sealable layer;

(d) wherein the core layer has a polymeric matrix selected from the group consisting of a propylene homopolymer, a propylene copolymer, and a polyethylene.

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17. (previously presented): A laminate film structure, comprising a first film laminated to a second film, wherein the first film is a heat-sealable film structure comprising:

(a) a core layer comprising a thermoplastic polymer, the core layer having a first side and a second side;

(b) a functional layer on the first side of the core layer, wherein the functional layer is selected from the group consisting of a laminating layer, a printable layer, a laminating and a printable layer, and a sealable layer; and

(c) a heat-sealable layer on the second side of the core layer comprising (i) a thermoplastic polymer and (ii) a slip system comprising a silicone gum having a viscosity greater than one million centistokes present in amount from about 0.2 wt. % to about 2.0 wt. % of the heat-sealable layer and at least one antiblocking agent present in an amount from about 0.05 wt. % to about 0.5 wt. % of the heat-sealable layer;

(d) wherein the antiblocking agent is a particulate antiblocking agent having an average particle size of from about 1 to about 5 μm .

18. (previously presented): A laminate film structure, comprising a first film laminated to a second film, wherein the first film is a heat-sealable film structure comprising:

(a) a core layer comprising a thermoplastic polymer, the core layer having a first side and a second side;

(b) a functional layer on the first side of the core layer, wherein the functional layer is selected from the group consisting of a laminating layer, a printable layer, a laminating and a printable layer, and a sealable layer; and

(c) a heat-sealable layer on the second side of the core layer comprising (i) a thermoplastic polymer and (ii) a slip system comprising a silicone gum having a viscosity greater than one million centistokes present in amount from about 0.2 wt. % to about 2.0 wt. % of the

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heat-sealable layer and at least one antiblocking agent present in an amount from about 0.05 wt. % to about 0.5 wt. % of the heat-sealable layer;

(d) wherein the core layer has a polymeric matrix selected from the group consisting of an ethylene propylene copolymer, propylene butylene copolymer, and a high density polyethylene.

19. (previously presented): The laminate film structure of claim 16, wherein the silicone gum has a viscosity in the range of 10 to 20 million centistokes.

20. (previously presented): The laminate film structure of claim 16, wherein the core layer further comprises an additive selected from the group consisting of a natural hydrocarbon additive, a synthetic hydrocarbon additive, a cavitating agent, an antistatic agent, and mixtures thereof.

21. (previously presented): The laminate film structure of claim 16, wherein the functional layer further comprises at least one antiblock additive.

22. (previously presented): The laminate film structure of claim 16, wherein the surface of the functional layer is flame treated or corona treated and the surface of the heat-sealable layer is untreated.

23. (previously presented): The laminate film structure of claim 16, wherein the thermoplastic polymer of the heat-sealable layer is selected from the group consisting of an ethylene-propylene random copolymer, a propylene-butylene random copolymer, an ethylene-propylene-butylene terpolymer, a linear low density polyethylene, a low density polyethylene, a metallocene-catalyzed polyethylene, an ethylene vinyl acetate, an ethylene-methyl acrylate, an

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ionomer, and blends thereof and the functional layer has a polymeric matrix selected from the group consisting of a propylene polymer, an ethylene-propylene block copolymer, a high density polyethylene, an ethylene vinyl alcohol copolymer, an ethylene-propylene random copolymer, a propylene-butylene copolymer, an ethylene-propylene-butylene terpolymer, a medium density polyethylene, a linear low density polyethylene, an ethylene vinyl acetate, an ethylene-methyl acrylate, and blends thereof.

24. (previously presented): The laminate film structure of claim 18, wherein the thermoplastic polymer of the heat-sealable layer is selected from the group consisting of a propylene-butylene random copolymer, a metallocene catalyzed polyethylene, an ethylene vinyl acetate, and an ethylene-methyl acrylate, an ionomer, and blends thereof.

25. (previously presented): The laminate film structure of claim 24, wherein the functional layer comprises a material selected from the group consisting of an ethylene vinyl alcohol copolymer, a propylene-butylene copolymer, an ethylene vinyl acetate, an ethylene-methyl acrylate, and blends thereof.

26. (previously presented): The laminate film structure of claim 24, wherein the antiblocking agent is selected from the group consisting of cross linked silicone resin powder, methyl methacrylate resin powder, a spherical silica powder, and blends thereof.

27. (previously presented): The laminate film structure of claim 18, wherein the core layer comprises a cavitating agent selected from the group consisting of polybutylene terephthalate, calcium carbonate, and blends thereof.

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28. (previously presented): The laminate film structure of claim 18, wherein the core layer is from about 5 to about 50 μm thick, the functional layer is from about 0.25 to about 3.0 μm thick, and the heat-sealable layer is from about 0.5 to about 7 μm thick.

29. (previously presented): The laminate film structure of claim 18, wherein the core layer is free of an antistatic agent and a fatty acid amide slip additive.

30. (previously presented): A coextruded heat-sealable film structure, comprising:

(a) a core layer comprising a thermoplastic polymer, the core layer having a first side and a second side;

(b) a functional layer on the first side of the core layer, wherein the functional layer is selected from the group consisting of a laminating layer, a printable layer, a laminating and a printable layer, and a sealable layer; and

(c) a heat-sealable layer on the second side of the core layer comprising (i) a thermoplastic polymer and (ii) a slip system comprising a silicone gum having a viscosity greater than one million centistokes present in amount from about 0.2 wt. % to about 2.0 wt. % of the heat-sealable layer and at least one antiblocking agent present in an amount from about 0.05 wt. % to about 0.5 wt. % of the heat-sealable layer;

(d) wherein the core layer has a polymeric matrix selected from the group consisting of a ethylene propylene copolymer, propylene butylene copolymer, and a high density polyethylene; and

(e) wherein the heat-sealable layer is comprised of a material selected from the group consisting of ethylene vinyl acetate, ethylene-methyl acrylate, an ionomer, and blends thereof.

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31. (previously presented): A coextruded heat-sealable film structure, comprising:

(a) a core layer comprising a thermoplastic polymer, the core layer having a first side and a second side;

(b) a functional layer on the first side of the core layer, wherein the functional layer is selected from the group consisting of a laminating layer, a printable layer, a laminating and a printable layer, and a sealable layer; and

(c) a heat-sealable layer on the second side of the core layer comprising (i) a thermoplastic polymer and (ii) a slip system comprising a silicone gum having a viscosity greater than one million centistokes present in amount from about 0.2 wt. % to about 2.0 wt. % of the heat-sealable layer and at least one antiblocking agent present in an amount from about 0.05 wt. % to about 0.5 wt. % of the heat-sealable layer;

(d) wherein the core layer has a polymeric matrix selected from the group consisting of a ethylene propylene copolymer, propylene butylene copolymer, and a high density polyethylene; and

(e) wherein the functional layer is comprised of a material selected from the group consisting of ethylene vinyl acetate, ethylene-methyl acrylate, ethylene vinyl alcohol copolymer, propylene-butylene copolymer, and blends thereof.

32. (previously presented): The coextruded heat-sealable film structure of claim 31, wherein the heat-sealable layer is comprised of a material selected from the group consisting of ethylene vinyl acetate, ethylene-methyl acrylate, an ionomer, and blends thereof.